

ABSTRACT

5 An amplified laser source for amplifying a laser projection that
includes a diode laser source modulated by a pulse generator applying an
alternate high and low voltages higher and lower than a threshold voltage
for projecting a modulated optical signal. The laser source further
includes a first erbium-doped fiber (EDF) for amplifying the modulated
optical signal. The laser source further includes a set of Bragg gratings for
receiving the modulated optical signal from the first EDF for reflecting a
10 grating-specific pulse-distortion-reduced optical signal. The laser source
further includes an electro-absorption (EA) modulator synchronized with
the pulse generator for increasing an extinction ratio of the optical signals.
The laser source further includes a second erbium doped fiber (EDF) for
receiving and amplifying the optical signal from the EA modulator
15 wherein the second erbium doped fiber (EDF) having a length of several
meters and a diameter greater than or equal to thirty-five micrometers.